

FAX NO. :

RECEIVED
CENTRAL FAX CENTER

Jan. 19 2006 08:05AM P2

40003-0011 (350-4377)

JAN 19 2006

89/826,198

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Patent Application of

David H. Bessel

Application No. 09/826,198

Filed: April 4, 2001

For: Method and Apparatus for Legacy
Analog Video Interconnections in a
Set-Top Box for Personal Video
Recording Applications

Group Art Unit: 2611

Examiner: Christopher M.
LambrechtDECLARATION UNDER 37 C.F.R. § 1.131

The undersigned, being sole inventor and Applicant of the above-identified patent application, hereby declares the following based on information and belief.

1. I, David H. Bessel, invented the subject matter now claimed in the above-identified patent application prior to December 28, 2000, the filing date of U.S. 2004/0261112 to Hicks, III et al. ("Hicks").

2. All acts related to the invention, including conception and reduction to practice of the invention, occurred in the United States.

3. I conceived of the idea for the invention as presently claimed prior to September 22, 2000. I then worked on the idea diligently until it was reduced to practice.

BEST AVAILABLE COPY

FAX NO. :

Jan. 19 2006 08:07AM P3

40055-0011 (505-4377)

09/828,198

4. The reduction to practice occurred at least as early as September 22, 2000. On that date, I submitted a written document ("disclosure document") fully describing the invention as claimed to the legal department of Sony Electronics, Inc. where I was employed at that time. A copy of this disclosure document is attached and is incorporated herein by reference. This disclosure document represents a reduction to practice because it describes the invention in such complete terms that one of skill in the art would have been enabled to practice the invention based on the description in the disclosure document.

5. Specifically, claim 1 of the instant application presently recites:

A television signal processing and recording system for handling both digital and analog video signals, said system comprising:
a video decoder in an analog signal path for converting an analog signal to a digital signal;
an encoder for compressing said digital signal output by said video decoder;
and
a connection for routing said compressed digital signal into a digital signal path in which said compressed digital signal is selectively either decompressed with a decoder and output to a television set or recorded on a digital data storage device.

This subject matter is disclosed and described in the disclosure document of September 22, 2000 in sufficient detail so as to enable practice of the invention as here claimed. Specifically, referring to Figure 2 of the disclosure document an analog signal path ("Analog Video") is shown that incorporates a video decoder ("Video Decoder") for converting an analog signal ("Analog Video") into a digital signal. An encoder ("MPEG2 Encoder") is also illustrated for compressing the digital signal output by the video decoder ("Video Decoder"). Figure 2 also shows a connection for routing the compressed digital signal into a digital signal path ("Digital Video," "DeMuxx") where the compressed digital signal is selectively decompressed with a decoder ("MPEG2 Decoder") or output to a digital data storage device ("PVR Hard Disk Drive"). This subject matter is further described and enabled to one of skill in the art in the text accompanying and describing Figure 2 of the disclosure document.

6. Consequently, the disclosure document represents an enabling disclosure and, therefore, a reduction to practice of the invention as presently recited in, for example, claim

1.

2

BEST AVAILABLE COPY

FAX NO. :

Jan. 19 2006 08:08AM P4

40000-0011 (50P4377)

09/826,186

7. As further evidence that this disclosure document represents an effective reduction to practice, the disclosure document was used by Steven L. Nichols, a registered patent attorney, to prepare the instant patent application, the sufficiency of which has never been questioned. The figures of the disclosure document dated September 22, 2000 also clearly form the basis for the figures of the instant patent application.

8. Consequently, I did conceive and reduce to practice the invention as currently claimed in the instant patent application at least as early as September 22, 2000, prior to the effective filing date of the Hicks reference.

9. All statements made herein of my own knowledge are true, all statements made herein on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and may jeopardize the validity of the application or any patent issuing thereon.

David H Bessel

David H Bessel

January 19, 2006

Date

BEST AVAILABLE COPY

40000-0011 (50P4377)

RECEIVED
CENTRAL FAX CENTER**JAN 19 2006**

09/826,198

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Patent Application of

David H. Bessel

Application No. 09/826,198

Filed: April 4, 2001

For: Method and Apparatus for Legacy
Analog Video Interconnections in a
Set-Top Box for Personal Video
Recording Applications

Group Art Unit: 2611

Examiner: Christopher M.
LambrechtDECLARATION UNDER 37 C.F.R. § 1.131

The undersigned, being sole inventor and Applicant of the above-identified patent application, hereby declares the following based on information and belief.

1. I, David H. Bessel, invented the subject matter now claimed in the above-identified patent application prior to December 28, 2000, the filing date of U.S. 2004/0261112 to Hicks, III et al. ("Hicks").
2. All acts related to the invention, including conception and reduction to practice of the invention, occurred in the United States
3. I conceived of the idea for the invention as presently claimed prior to September 22, 2000. I then worked on the idea diligently until it was reduced to practice.

40000-0011 (50P4377)

09/826,198

4. The reduction to practice occurred at least as early as September 22, 2000. On that date, I submitted a written document ("disclosure document") fully describing the invention as claimed to the legal department of Sony Electronics, Inc. where I was employed at that time. A copy of this disclosure document is attached and is incorporated herein by reference. This disclosure document represents a reduction to practice because it describes the invention in such complete terms that one of skill in the art would have been enabled to practice the invention based on the description in the disclosure document.

5. Specifically, claim 1 of the instant application presently recites:

A television signal processing and recording system for handling both digital and analog video signals, said system comprising:

a video decoder in an analog signal path for converting an analog signal to a digital signal;

an encoder for compressing said digital signal output by said video decoder; and

a connection for routing said compressed digital signal into a digital signal path in which said compressed digital signal is selectively either decompressed with a decoder and output to a television set or recorded on a digital data storage device.

This subject matter is disclosed and described in the disclosure document of September 22, 2000 in sufficient detail so as to enable practice of the invention as here claimed. Specifically, referring to Figure 2 of the disclosure document an analog signal path ("Analog Video") is shown that incorporates a video decoder ("Video Decoder") for converting an analog signal ("Analog Video") into a digital signal. An encoder ("MPEG2 Encoder") is also illustrated for compressing the digital signal output by the video decoder ("Video Decoder"). Figure 2 also shows a connection for routing the compressed digital signal into a digital signal path ("Digital Video," "DeMuxx") where the compressed digital signal is selectively decompressed with a decoder ("MPEG2 Decoder") or output to a digital data storage device ("PVR Hard Disk Drive"). This subject matter is further described and enabled to one of skill in the art in the text accompanying and describing Figure 2 of the disclosure document.

6. Consequently, the disclosure document represents an enabling disclosure and, therefore, a reduction to practice of the invention as presently recited in, for example, claim 1.

40000-0011 (50P4377)

09/826,198

7. As further evidence that this disclosure document represents an effective reduction to practice, the disclosure document was used by Steven L. Nichols, a registered patent attorney, to prepared the instant patent application, the sufficiency of which has never been questioned. The figures of the disclosure document dated September 22, 2000 also clearly form the basis for the figures of the instant patent application.

8. Consequently, I did conceive and reduce to practice the invention as currently claimed in the instant patent application at least as early as September 22, 2000, prior to the effective filing date of the Hicks reference.

9. All statements made herein of my/own knowledge are true, all statements made herein on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and may jeopardize the validity of the application or any patent issuing thereon.

/David H. Bessel/

David H. Bessel

January 19, 2006

Date

RECEIVED

SEP 22 2000

1 of 5

Sony
Confidential

INVENTION DISCLOSURE

IPD SAN DIEGO

Sony Confidential

Note: Detailed instructions for completing this form can be found in Appendix V of Sony's Patent Guide for Engineers and Inventors.

I IDENTIFICATION

IPD Case #:

50P4377
(IPD use only)

1a. Short Descriptive Title of the Invention:

Method of legacy video interconnection in Set Top Box for Personal Video Recording Applications

1b. Short Summary of the Invention:

This discloses a method of connecting legacy video to a
cable Set Top Box (STB) to facilitate Personal Video Recording (PVR) applications..

2. Name of Responsible Patent Coordinator (if any): Deborah Hutchinson

Business Address: 16450 West Bernardo Dr. MZ 7205 / San Diego, CA 92127

Business Phone/Fax: 858-942-4170 / 858-921-9142

Business Email Address: Debbie.Hutchinson@am.sony.com

3. Identify all persons who contributed to the present invention including persons from other Sony Divisions, Sony Japan and Outside Companies. Final determination of inventorship is a legal question which will be resolved at a later time.

(1)

Full Legal Name: David H. Bessel

Home Address: P.O. Box 669, Poway, CA 92074

Citizenship: US

Business Address (include mail drop): 16450 West Bernardo Dr. MZ 7200 / San Diego, CA 92127

Business Phone/Fax: 858-942-2646 / 858-921-9178

Business Email Address: Dave.Bessel@am.sony.com dave_bessel@cts.com

Division / Company / Location: ATC / DCA / San Diego

☒ Sony Employee ☐ Intern ☐ Contractor/Consultant ☐ Temp. ☐ Other:

Manager's Name: David A. Desch

Business Address: 16450 West Bernardo Dr., San Diego, CA 92127, US

Business Phone/Fax: 858 942 -2784

Business Email Address: Dave.Desch@am.sony.com

(2)

Full Legal Name:

Home Address:

Citizenship:

Business Address (include mail drop):

Business Phone/Fax:

Business Email Address:

Division / Company / Location:

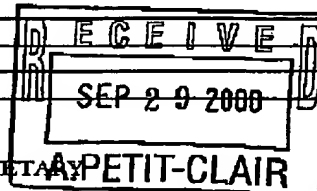
☐ Sony Employee ☐ Intern ☐ Contractor/Consultant ☐ Temp. ☐ Other:

Manager's Name:

Business Address:

Business Phone/Fax:

Business Email Address:



Rev 5/99

SONY CONFIDENTIAL and PROPRIETARY

AEG

2 of 5

(3)

Full Legal Name:	
Home Address:	
Citizenship:	(If Japanese, please provide name in Kanji)
Business Address (include mail drop):	
Business Phone/Fax:	/
Business Email Address:	
Division / Company / Location: /	
<input type="checkbox"/> Sony Employee	<input type="checkbox"/> Intern <input type="checkbox"/> Contractor/Consultant <input type="checkbox"/> Temp. <input type="checkbox"/> Other :
Manager's Name:	
Business Address:	
Business Phone/Fax:	/
Business Email Address:	

(4)

Full Legal Name:	
Home Address:	
Citizenship:	(If Japanese, please provide name in Kanji)
Business Address (include mail drop):	
Business Phone/Fax:	/
Business Email Address:	
Division / Company / Location: /	
<input type="checkbox"/> Sony Employee	<input type="checkbox"/> Intern <input type="checkbox"/> Contractor/Consultant <input type="checkbox"/> Temp. <input type="checkbox"/> Other :
Manager's Name:	
Business Address:	
Business Phone/Fax:	/
Business Email Address:	

(Use Additional Inventors sheet if necessary)

II. BACKGROUND INFORMATION

- Do you believe this invention was developed while working under or in the performance of experimental, developmental or research work called for by a Government Contract or upon the understanding that a Government Contract would be awarded?
X ☐ NO ☐ YES
- Has your invention been disclosed to anyone outside of Sony in a speech, exhibit, presentation, product, product manual, report, lecture, trade show, technical article, publication or otherwise?
X ☐ NO ☐ YES
- Is this invention related to any previous Sony Invention Disclosures of which you are aware (made by you or someone else)?
X ☐ NO ☐ YES
- If you responded "YES" to any of questions 1-3, please explain below:

3 of 5

5. Name of product(s) or project(s) for which this invention was developed:

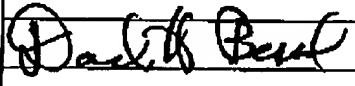
Millennium Cablevision Set Top Box (STB)

6. When do you expect a product incorporating this invention to be sold, offered for sale or shown to someone outside of Sony? (If a product or prototype has already been sold, offered for sale or shown, please identify the earliest date this happened.):
Jan 2002
7. Has a working model of the invention been built and tested (or appropriate software been written)?
☒ NO ☐ YES: If yes, who has witnessed a demonstration, and when?
8. List below any patents, publications, articles, texts, products, etc. which describe technology similar to your invention including reference material which may be useful in understanding the background technology of your invention: (Include a copy of each item to IPD. Please include copies of all bibliographical information.)

III. DESCRIPTION OF THE INVENTION

Provide a concise technical description of your invention in the format outlined below on the following pages.

- 1: Explain the problems, issues or needs which led to the invention, and explain how others have addressed these problems, issues or needs.
- 2: Describe your invention in terms of how it solves the problems described in paragraph 1. Specifically identify the new or novel features of your invention. Describe the construction and operation of the invention including drawings (flow charts, schematics, block diagrams, mechanical drawings, photographs, etc.) You may attach documentation in the form of letters, memos, engineering notebook pages, etc. if available, or you may use as many invention disclosure data sheets as necessary. Be sure each page is signed, dated and witnessed.
- 3: If there is more than one way to implement your invention, describe the "Best Mode" or your personal preference as to how to best implement, build, produce, or use your invention (e.g. preferred parts, materials, techniques, etc. which you feel are best in practicing your invention). Each submitter's opinion is important here, even if there is disagreement. Please list anything you think will make the invention better in any way.
- 4: Briefly describe any alternate uses, variations or modifications of your invention, if any, which you contemplate.

Signature of Submitter(s)			Read and understood by:		
			Signatures of Witnesses (at least two witnesses preferred)		
Date	7 20 00		Date	7/20/00	
Date			Date		
Date			Date		
Date			Date		

Rev 5/99

SONY CONFIDENTIAL and PROPRIETARY

Invention Disclosure Data Sheet

Paragraph 1. Explanation of Problem

Contemporary cable Set Top Boxes (STB) are required to tune both digital and legacy analog channels. Digital channels are received in a compressed format. Analog channels are received as standard NTSC (in the US,) format. For Personal Video Recording (PVR) applications, the legacy analog video material must be converted to digital form and must be compressed prior to being recorded on a disk drive storage unit. This conversion process adds complexity to the interconnection paths within the STB. The purpose of this patent disclosure is a method for interconnection that creates less complex system organizations..

Paragraph 2. Explanation of Proposed Solution

Figure 1 illustrates a conventional method of connecting legacy, analog video from a tuner to the video presentation section and PVR hard disk drive in a STB. Analog video is routed from the tuner into a video decoder which converts it into a digital format. This digitized legacy video is then routed into the Presentation portion of the STB for active display and routed to an MPEG2 video encoder where it is compressed before being sent to the hard disk recorder. Note, that there is a separate path required for routing the original digital source video to the hard disk recorder. Both the Video Presentation unit and PCR disk must accept material from dual sources.

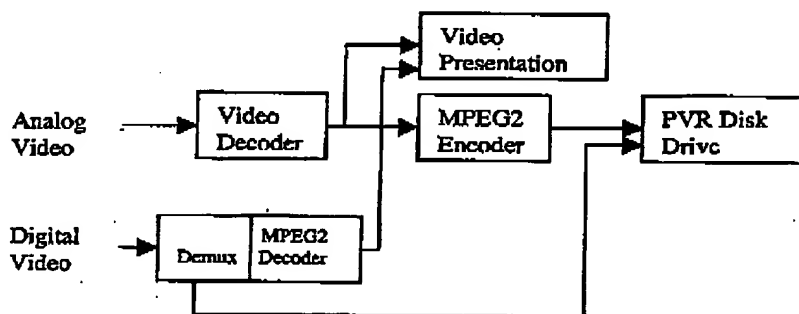


Figure 1

5 of 5

Figure 2 depicts the new, simplified organization. The key to this organization is that the legacy analog video is always compressed, regardless of whether it is being recorded, and then decompressed for presentation. Thus, both the legacy analog video and the digital video streams are treated exactly the same for presentation and for PVR recording activities, traveling over the same data path and a single interface to the PVR recorder. Other advantages may also exist. The dual port required in figure 1 into the PVR hard disk drive has been eliminated.

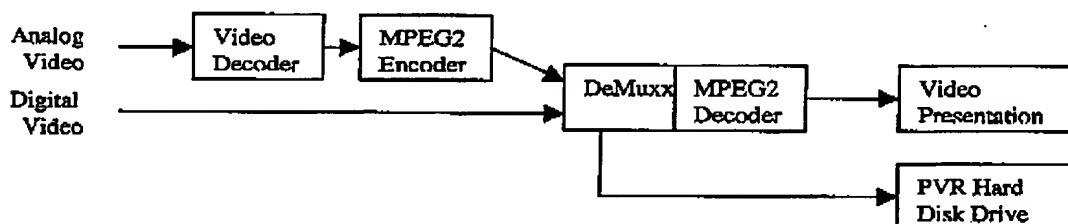


Figure 2

Paragraph 3. Preferred Implementation

There is no preferred method of implementation this organization. Implementations are dependent on other aspects of the system design and the specific components utilized.

Signature of Submitter(s)			Read and understood by:		
Date	7/20/00		Date	7/20/00	
Date			Date		
Date			Date		
Date			Date		

Rev 5/99

SONY CONFIDENTIAL and PROPRIETARY